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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/775,925	02/10/2004	Fred Grow	00768P0006US	1416
32116	7590	11/01/2005	EXAMINER	
WOOD, PHILLIPS, KATZ, CLARK & MORTIMER 500 W. MADISON STREET SUITE 3800 CHICAGO, IL 60661			LAI, ANNE VIET NGA	
			ART UNIT	PAPER NUMBER
			2636	

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/775,925

Applicant(s)

GROW, FRED

Examiner

Anne V. Lai

Art Unit

2636

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-29 and 32-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 30, 31, 37 and 38 is/are allowed.
- 6) ☒ Claim(s) 1-5, 9-19, 27-29 and 32-35 is/are rejected.
- 7) ☒ Claim(s) 6-8, 20-26 and 36 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/01/04 &amp; 6/28/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:

In figures 1 or 2, reference numbers 10-12, 16-18, 20-22, 24-27, 30, 31, 33-35, 38-40, 42- 43, 46 are not shown.

In figure 3B, LED 67 and LED 70 are not shown.

In figure 4, reference numbers 14, 33, 35 are not shown.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. The disclosure is objected to because of the following informalities:

In page 14, line 5: "Fig. 4" should be changed to - - Fig. 5 - - because the cited elements TP1, TP2, 62 and 63 are shown in Fig. 5 not Fig. 4.

In page 14, line 12, LED 67 and circuit 68 are not shown in the drawing.

In page 15, lines 8 and 10, LED 70 is not shown in the drawing.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 27, 28-29, 32-34 are rejected under 35 U.S.C. 102(b) as being anticipated by **Mizutani** [US. 5,189,398].

In claim 1, Mizutani discloses a flame detector comprising: a UV flame sensor tube 1 having a cathode and an anode; a DC supply; a quench circuit 3 connecting the cathode and anode of the UV tube with the DC supply for generating pulse signal from output of the UV sensor; and a discriminator (flame recognition circuit 4) for distinguishing whether the pulse signal from the output of the UV sensor derived from a UV radiation from flame (desired signal) or a UV radiation from radiation source other than a flame (undesired signal) (Fig. 1; col. 1, lines 51-65).

In claim 27, Mizutani discloses quench circuit comprises a parallel resistor-capacitor circuit connected in series with cathode/anode circuit of the UV tube (3, Fig. 1).

In claims 28-29, 32-34, Mizutani discloses a flame detector comprising: a UV gas discharge tube having anode and cathode electrodes; a DC power supply; a quench

circuit series connected with the UV tube anode and cathode electrodes and the power supply; the quench circuit includes a parallel resistor-capacitor; the detector outputs a pulse signal in response to detection of a flame (Fig. 1; col. 1, lines 51-65).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2-3 and 9-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Graves** [US. 3,541,549] in view of **Mizutani**.

In claims 2-3, Graves teaches a fuel burner having a UV detector to detect flame and to open or closing the fuel valve for safety purpose depending on the flame detected that is consider normal or abnormal (abstract). Graves does not teach the flame detector type as claimed however Mizutani does (abstract). It would have been obvious to any one of ordinary skill in the art at the time the invention was made the use of a particular type of UV flame detector for detecting normal or abnormal type of flame is based on designer choice by preference or by convenient of supply or cost.

In claims 9-17, Graves (abstract; claim 2) teaches using a lockout relay with time delay to close the fuel valve if the flame failure occurs for any reason for safety standpoint.

7. Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Mizutani** in view of **Egi** [US. 4,835,525].

In claim 4-5, Mizutani does not specify using a band pass filter to reject high and low frequency pulse signals; Egi teaches a flame detector circuit using a band pass filter to pass an intermediate frequency pulse signal and reject high and low frequency pulse signals (58; fig. 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made, the use of a band pass filter for passing only desired flame responsive signal for operation of a fuel valve provide reliability in controlling the burner and safety to the system.

8. Claims 18-19 and 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Mizutani**.

In claims 18-19, Mizutani discloses an alarm is being activated to produce intermittent sounds or luminous indicator according to intermittent pulse output signal for a time period set by an output timer (figs. 1, 5a-e; col. 4, lines 29-48; col. 5, lines 39-50). Although frequency is not stated, however, it would have been obvious to one of ordinary skill in the art at the time the invention was made, frequency signal indicating can be a designer choice to communicate information to the user.

In claim 35, Mizutani disclose a wired connection of R/C circuit 3 with the UV sensor 1 (fig. 1). It would have been obvious to any one of ordinary skill in the art at the time the invention was made the R/C circuit can be connected with the cathode/anode circuit locally or remotely based on designer choice.

***Allowable Subject Matter***

9. Claims 30-31 and 37-38 are allowed.
10. Claims 6-8, 20-26 and 36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***


11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anne V. Lai whose telephone number is 571-272-2974. The examiner can normally be reached on 8:00 am to 5:30 pm, Monday to Thursday.  
  
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hofsass Jeffery can be reached on 571-272-2981. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

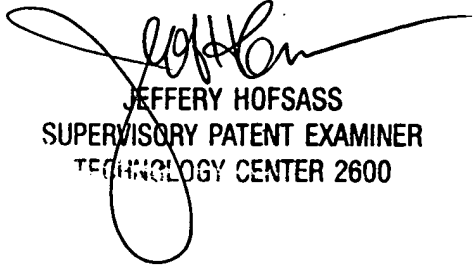
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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AVL  
10/22/05

  
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SUPERVISORY PATENT EXAMINER  
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